

SEQUENCE LISTING

<110> AXEN, ANDREAS
 BAUMANN, HERBERT
 CARREDANO, ENRIQUE

<120> IMMUNOGLOBULIN G BINDING POCKET

<130> PU0284

<140> 10/532,369

<141> 2005-04-20

<150> PCT/SE03/01435

<151> 2003-09-12

<150> SE 0203266-6

<151> 2002-10-31

<160> 40

<170> PatentIn Ver. 3.3

<210> 1

<211> 214

<212> PRT

<213> Homo sapiens

<400> 1

Glu	Leu	Val	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly	1	5	10	15
Asp	Arg	Val	Asn	Ile	Ala	Cys	Arg	Ala	Ser	Gln	Gly	Ile	Ser	Ser	Ala	20	25	30	
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Arg	Leu	Leu	Ile	35	40	45	
Tyr	Asp	Ala	Ser	Asn	Leu	Glu	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	50	55	60	
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	65	70	75	80
Glu	Asp	Phe	Ala	Ile	Tyr	Tyr	Cys	Gln	Gln	Phe	Asn	Ser	Tyr	Pro	Leu	85	90	95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala	100	105	110	
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	115	120	125	
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	130	135	140	
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	145	150	155	160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175
 Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190
 Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205
 Phe Asn Arg Gly Glu Cys
 210

<210> 2
 <211> 225
 <212> PRT
 <213> Homo sapiens

<400> 2
 Gln Val Lys Leu Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly
 1 5 10 15
 Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser
 20 25 30
 Tyr Gly Leu His Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp
 35 40 45
 Met Gly Trp Ile Ser Ala Gly Thr Gly Asn Thr Lys Tyr Ser Gln Lys
 50 55 60
 Phe Arg Gly Arg Val Thr Phe Thr Arg Asp Thr Ser Ala Thr Thr Ala
 65 70 75 80
 Tyr Met Gly Leu Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr
 85 90 95
 Cys Ala Arg Asp Pro Tyr Gly Gly Gly Lys Ser Glu Phe Asp Tyr Trp
 100 105 110
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
 115 120 125
 Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr
 130 135 140
 Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
 145 150 155 160
 Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
 165 170 175
 Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
 180 185 190
 Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
 195 200 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
 210 215 220

Cys
 225

<210> 3
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 3
 Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
 1 5 10 15
 Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
 20 25 30
 Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
 35 40 45
 Asn Ser Gln Glu Ser Val Thr Glx Glx Asp Ser Lys Asp Ser Thr Tyr
 50 55 60
 Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
 65 70 75 80
 Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
 85 90 95
 Thr Lys Ser Phe Asn Arg Gly Glu Cys
 100 105

<210> 4
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 4
 Thr Pro Leu Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr
 1 5 10 15
 Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
 20 25 30
 Lys Ser Gly Thr Ala Ser Val Val Asx Leu Leu Asn Asn Phe Tyr Pro
 35 40 45
 Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
 50 55 60
 Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
 65 70 75 80

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
 85 90 95

Lys Val Tyr Ala Asx Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
 100 105 110

Thr Lys Ser Phe Asn Arg Gly Glu Asx
 115 120

<210> 5
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 5
 Ser Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr
 1 5 10 15

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
 20 25 30

Lys Ser Gly Thr Ala Ser Val Val Gly Leu Leu Asn Asn Phe Tyr Pro
 35 40 45

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
 50 55 60

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
 65 70 75 80

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
 85 90 95

Lys Val Tyr Ala Gly Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
 100 105 110

Thr Lys Ser Phe Asn Arg Gly Glu Gly
 115 120

<210> 6
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 6
 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
 1 5 10 15

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
 20 25 30

Pro Arg Glu Ala Lys Val Gln Trp Val Asp Asn Ala Leu Gln Ser Gly
 35 40 45

Asn Ser Gln Glu Ser Val Thr Glu Gln Glu Ser Lys Asp Ser Thr Tyr
 50 55 60

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
65 70 75 80

Lys Val Tyr Ala Gly Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
85 90 95

Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 7

<211> 121

<212> PRT

<213> Homo sapiens

<400> 7

Trp Phe Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
1 5 10 15

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
20 25 30

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr His
35 40 45

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
50 55 60

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
65 70 75 80

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
85 90 95

Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
100 105 110

Thr Lys Ser Phe Asn Arg Gly Glu Cys
115 120

<210> 8

<211> 106

<212> PRT

<213> Homo sapiens

<400> 8

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
1 5 10 15

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
20 25 30

Pro Arg Glu Ala Lys Val Gln Arg Lys Val Asp Asn Ala Leu Gln Ser
35 40 45

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Glu Ser Lys Asp Ser Thr
 50 55 60
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
 65 70 75 80
 His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
 85 90 95
 Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 100 105

<210> 9
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 9
 Phe Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
 1 5 10 15
 Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
 20 25 30
 Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asp Asp Phe Tyr Pro
 35 40 45
 Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
 50 55 60
 Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
 65 70 75 80
 Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
 85 90 95
 Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
 100 105 110
 Thr Lys Ser Phe Asn Arg Gly Glu Cys
 115 120

<210> 10
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 10
 Phe Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg Thr
 1 5 10 15
 Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
 20 25 30
 Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
 35 40 45

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
 50 55 60
 Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
 65 70 75 80
 Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
 85 90 95
 Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
 100 105 110
 Thr Lys Ser Phe Asn Arg Gly Glu Cys
 115 120

<210> 11
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 11
 Tyr Ser Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
 1 5 10 15
 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
 20 25 30
 Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
 35 40 45
 Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
 50 55 60
 Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
 65 70 75 80
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 85 90 95

<210> 12
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 12
 Ile Glu Leu Asp Ile Val Val Val Pro Ala Pro Met Arg Gly Ser Leu
 1 5 10 15
 Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
 20 25 30
 Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser
 35 40 45

Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
 50 55 60

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
 65 70 75 80

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
 85 90 95

Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
 100 105 110

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
 115 120 125

Val Glu Pro
 130

<210> 13
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 13
 Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 1 5 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
 65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85 90 95

Lys Val Glu Pro
 100

<210> 14
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 14
 Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1 5 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 20 25 30

Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser
		35					40					45			
Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser
	50					55					60				
Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr
65					70					75					80
Tyr	Thr	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys
				85					90					95	
Arg	Val	Glu	Leu	Lys	Thr	Pro	Leu	Gly	Asp	Thr	Thr	His	Thr	Cys	Pro
			100					105					110		
Arg	Cys	Pro	Glu	Pro	Lys	Ser	Cys	Asp	Thr	Pro	Pro	Pro	Cys	Pro	Arg
		115					120					125			
Cys	Pro	Glu	Pro	Lys	Ser	Cys	Asp	Thr	Pro	Pro	Pro				
	130					135					140				

```
<210> 15
<211> 140
<212> PRT
<213> Homo sapiens
```

```
<400> 15  
Ala Ser Phe Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg  
1          5              10             15  
  
Ser Thr Pro Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
           20         25       30  
  
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
        35              40             45  
  
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
      50            55             60  
  
Leu Ser Ser Val Val Tyr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
   65           70             75             80  
  
Tyr Thr Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys  
                85               90             95  
  
Arg Val Glu Leu Lys Thr Pro Leu Gly Asp Thr Thr His Thr Cys Pro  
            100          105             110  
  
Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg  
        115           120             125  
  
Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro  
     130           135             140
```

<210> 16
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 16
 Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser
 1 5 10 15
 Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
 20 25 30
 Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
 35 40 45
 Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
 50 55 60
 Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
 65 70 75 80
 Thr Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg
 85 90 95
 Val Glu Leu Lys Thr Pro Leu Gly Asp Thr Thr His Thr Cys Pro Arg
 100 105 110
 Cys Pro Glu Pro Lys
 115

<210> 17
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 17
 Phe Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser
 1 5 10 15
 Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
 20 25 30
 Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
 35 40 45
 Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
 50 55 60
 Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
 65 70 75 80
 Thr Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg
 85 90 95
 Val Glu Leu Lys Thr Pro Leu Gly Asp Thr Pro Pro Pro Cys Pro Arg
 100 105 110

Cys Pro Glu Pro Lys
115

<210> 18
<211> 103
<212> PRT
<213> Homo sapiens

<400> 18
Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser
1 5 10 15
Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
20 25 30
Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
35 40 45
Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
50 55 60
Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
65 70 75 80
Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr
85 90 95
Val Glu Arg Lys Cys Cys Val
100

<210> 19
<211> 128
<212> PRT
<213> Homo sapiens

<400> 19
Ile Ile Tyr Phe Asp Tyr Ala Asp Phe Ile Met Asp Tyr Trp Gly Gln
1 5 10 15
Gly Thr Thr Val Thr Val Ser Thr Ala Ser Thr Lys Gly Pro Ser Val
20 25 30
Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala
35 40 45
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
50 55 60
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
65 70 75 80
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
85 90 95
Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys
100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val
 115 120 125

<210> 20
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 20
 Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1 5 10 15
 Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 20 25 30
 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35 40 45
 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50 55 60
 Leu Ser Ser Trp Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr
 65 70 75 80
 Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr
 85 90 95
 Val Glu Arg Lys Cys Cys Val
 100

<210> 21
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 21
 Ala Ser Phe Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1 5 10 15
 Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 20 25 30
 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 35 40 45
 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50 55 60
 Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr
 65 70 75 80

<400> 22
Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser
1 5 10 15

```
<400> 23
Ile Ile Tyr Phe Asp Tyr Ala Asp Phe Ile Met Asp Tyr Trp Gly Gln
  1             5             10             15
```

Leu Gln Xaa Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
85 90 95

Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys
 100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro
 115 120 125

<210> 24

<211> 104

<212> PRT

<213> Homo sapiens

<400> 24

Ala Ser Phe Lys Gly Pro Ser Val Phe Pro Leu Val Pro Cys Ser Arg
 1 5 10 15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Cys Ala Leu Thr Ser
 35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
 65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
 85 90 95

Arg Val Glu Ser Lys Tyr Gly Pro
 100

<210> 25

<211> 105

<212> PRT

<213> Homo sapiens

<400> 25

Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser
 1 5 10 15

Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
 20 25 30

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
 35 40 45

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
 50 55 60

Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
 65 70 75 80
 Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg
 85 90 95
 Val Glu Pro Lys Ser Cys Asp Lys Thr
 100 105

<210> 26
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 26
 Arg Asp Thr Ala Met Phe Phe Ala His Trp Gly Gln Gly Thr Leu Val
 1 5 10 15
 Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
 20 25 30
 Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
 35 40 45
 Val Lys Asp Tyr Phe Pro Gln Pro Val Thr Val Ser Trp Asn Ser Gly
 50 55 60
 Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
 65 70 75 80
 Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
 85 90 95
 Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
 100 105 110
 Lys Val Asp Lys Lys Val Glu Pro
 115 120

<210> 27
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 27
 Gly Gly His Gly Phe Cys Ser Ser Ala Ser Cys Phe Gly Pro Asp Tyr
 1 5 10 15
 Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 20 25 30
 Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
 35 40 45
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Gln Pro Val
 50 55 60

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 65 70 75 80
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 85 90 95
 Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
 100 105 110
 Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
 115 120 125

<210> 28
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 28
 Val Pro Leu Val Val Asn Pro Trp Gly Gln Gly Thr Leu Val Thr Val
 1 5 10 15
 Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
 20 25 30
 Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
 35 40 45
 Asp Tyr Phe Pro Gln Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
 50 55 60
 Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
 65 70 75 80
 Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 85 90 95
 Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
 100 105 110
 Asp Lys Arg Val Ala Pro
 115

<210> 29
 <211> 113
 <212> PRT
 <213> Homo sapiens

<400> 29
 Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Ala Lys
 1 5 10 15
 Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln
 20 25 30

Thr Asn Ser Met Val Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro
 35 40 45
 Glu Pro Val Thr Val Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val
 50 55 60
 His Thr Phe Pro Ala Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser
 65 70 75 80
 Ser Val Thr Val Pro Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys
 85 90 95
 Asn Val Ala His Pro Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val
 100 105 110

Pro

<210> 30
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 30
 Val Leu Phe Gln Gln Leu Val Leu Tyr Ala Pro Phe Asp Ile Trp Gly
 1 5 10 15
 Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
 20 25 30
 Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
 35 40 45
 Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Gln Pro Val Thr Val
 50 55 60
 Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
 65 70 75 80
 Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
 85 90 95
 Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
 100 105 110
 Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro
 115 120 125

<210> 31
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 31
 Arg Asp Tyr Tyr Asp Ser Gly Gly Tyr Phe Thr Val Ala Phe Asp Ile
 1 5 10 15

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 20 25 30
 Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
 35 40 45
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 50 55 60
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 65 70 75 80
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 85 90 95
 Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
 100 105 110
 Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro
 115 120 125

<210> 32
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 32
 Gly Ala Gly Val Thr Leu Val Arg Gly Ala Ile Lys Pro Ser Pro Asp
 1 5 10 15
 Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
 20 25 30
 Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
 35 40 45
 Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
 50 55 60
 Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
 65 70 75 80
 Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
 85 90 95
 Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 100 105 110
 Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
 115 120 125
 Asp Lys Arg Val Glu Pro
 130

<210> 33
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 33
 Gly Gly His Gly Phe Cys Ser Ser Ala Ser Cys Phe Gly Pro Asp Tyr
 1 5 10 15
 Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 20 25 30
 Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
 35 40 45
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Gln Pro Val
 50 55 60
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 65 70 75 80
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 85 90 95
 Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
 100 105 110
 Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
 115 120 125

<210> 34
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 34
 Gly Asp Val Tyr Asn Arg Gln Trp Gly Gln Gly Thr Leu Val Thr Val
 1 5 10 15
 Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
 20 25 30
 Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Asx Leu Val Lys
 35 40 45
 Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
 50 55 60
 Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
 65 70 75 80
 Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 85 90 95
 Gln Thr Tyr Ile Asx Asn Val Asn His Lys Pro Ser Asn Thr Lys
 100 105 110

<210> 35
 <211> 118
 <212> PRT
 <213> Homo sapiens

<400> 35
 Gly Asp Val Tyr Asn Arg Gln Trp Gly Gln Gly Thr Leu Val Thr Val
 1 5 10 15
 Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
 20 25 30
 Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys
 35 40 45
 Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
 50 55 60
 Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
 65 70 75 80
 Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 85 90 95
 Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val
 100 105 110
 Asp Lys Arg Val Glu Pro
 115

<210> 36
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 36
 Asp Val Tyr Asn Arg Gln Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 1 5 10 15
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
 20 25 30
 Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 35 40 45
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 50 55 60
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 65 70 75 80
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln
 85 90 95
 Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
 100 105 110

Lys Thr Val Glu Arg
115

<210> 37
<211> 122
<212> PRT
<213> Homo sapiens

<400> 37
Pro Tyr Gly Gly Gly Lys Ser Glu Phe Asp Tyr Trp Gly Gln Gly Thr
1 5 10 15
Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
20 25 30
Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
35 40 45
Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
50 55 60
Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
65 70 75 80
Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
85 90 95
Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
100 105 110
Asn Thr Lys Val Asp Lys Lys Val Glu Pro
115 120

<210> 38
<211> 119
<212> PRT
<213> Homo sapiens

<400> 38
Leu Ile Ala Gly Gly Ile Asp Val Trp Gly Gln Gly Ser Leu Val Thr
1 5 10 15
Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
20 25 30
Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
35 40 45
Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
50 55 60
Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
65 70 75 80

```

<400> 39
Leu Ile Ala Gly Gly Ile Asp Val Trp Gly Gln Gly Ser Leu Val Thr
  1              5              10              15

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
      20              25              30

Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
      35              40              45

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
  50              55              60

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
  65              70              75              80

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
      85              90              95

Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
      100              105              110

Val Asp Lys Lys Val Glu Pro
      115

```

```

<400> 40
Glu Thr Met Ala Ser Arg Lys Arg Ala Phe Asp Ile Trp Gly Gln Gly
 1             5             10             15

Thr Met Val Thr Val Ser Ala Ala Ser Thr Lys Gly Pro Ser Val Phe
      20             25             30

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Gly Gly Thr Ala Ala Leu
      35             40             45

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 50             55             60

```

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
65 70 75 80

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Ser Val Pro Ser
85 90 95

Ser Asn Leu Gly Thr Gln Thr Tyr Thr Cys Asn Val Asn His Lys Pro
100 105 110

Ser Asn Thr Lys Val Asp Lys Thr Val Glu Leu
115 120